

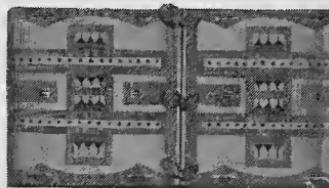
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AN ACCOUNT
OF THE
INDIANS OF THE SANTA BARBARA ISLANDS
IN CALIFORNIA.

BY

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CORRESPONDING MEMBER OF THE ROYAL BOHEMIAN SOCIETY OF SCIENCES, PRAGUE.

SEPARATABDRUCK AUS DEN SITZUNGSBERICHTEN DER KÖNIGL. BÖHM.
GESELLSCHAFT DER WISSENSCHAFTEN. PRAG 1904.

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I.

An Account of the Indians of the Santa Barbara Islands in California.

By Gustav Eisen PhD.,
Corresponding Member of the Royal Bohemian Society of Sciences Prague.

Presented the 8th Januar 1904.

Introductory.

Having been requested to write a short account of the Indians of the Santa Barbara Islands I accepted the invitation with pleasure, though with some misgivings. The fact is that next to nothing is known about these now extinct Indians, and the few notices extant are so scattered in rare books and periodicals of an evanescent nature, that it would take months and even years to gather them together. In other words our historical knowledge of the Indians is too small to be very interesting though just on that account the more valuable. There has never appeared in print any connective narrative of these Indians, and the following notes have been culled from what literature I could find without going outside of San Francisco, together with notes made during my visits to these islands in 1873 and 1897. At the earliest of these visits the Indians had already been totally extinct for twenty years.

While the skulls and skeletons presented to the Society were collected only on the Island of Santa Rosa, I have thought it best to include in this account all the other islands of the channel. There can be no doubt that the natives of all these islands were at the same degree of savagery, and must be considered together, even though we

find that they belonged to different tribes, groups or nations, and to distinct linguistic families. I am under great obligations to Mrs ELISA MILLER, the owner of Santa Rosa Island, for aid in procuring the specimen presented to the Bohem. Society.

Gustav Eisen,
San Francisco, California, Dec. 3d. 1093.

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The Santa Barbara Islands and their Extinct Indians.

The islands known as the Santa Barbara Islands are situated outside the channel of Santa Barbara in southern California. During the early navigators' time the spaniards designated the whole country from Mexico northwards as the „two Californias“. The lower part which we know as Lower California was called then, and is yet, Baja California. The upper part now simply called California by English speaking people was known as Alta California. The channel of Santa Barbara and its islands were among the first things to attract the special attention of the Spanish navigators upon their arrival in Alta California. This was undoubtedly due to the greater fertility of the country, and to the splendid harbors offered by the islands. These islands are separated into two groups. The northern group consists of four islands, placed in a row parallel to the coast

of Point Conception. The names of these islands were principally given by Viscaino. They are from west to east: San Miguel, Santa Rosa, Santa Cruz and Anacápa, the latter being merely a rock, without harbor and without water. The southern islands are also four, but they are placed differently, being grouped in a parallelogram. The names of these islands are: San Clemente, Santa Barbara, San Nicolas and Santa Catalina. At the first advent of white man all these islands were inhabited by Indians. These have now been extinct for some time, the last one dying in 1853. Though the Indians once numbered several thousand on these islands, they became quickly exterminated after the advent of the missionaries. What caused their extermination will be referred to further on.

Physical Nature and Aspects of the Islands.

Nearly all the islands of the group are peculiarly sheltered from the northern winds by the projecting part of the mainland „Point Conception“. The two most favored Islands are Santa Cruz and Santa Catalina, the islands of San Miguel, Santa Rosa and San Clemente being much less protected than the others. The most violent winds on the coast of California are those from the north, north-west and north-east, these prevailing during the months of April to November, while during the balance of the year the heavy southern gales bring with them rain or even, though seldom—as during Cabrillo's voyage—snow. From the northern winds the islands are thus protected by the mainland, while the eastern and northern shores are protected by the mountainous backbone of each island. So perfect is this shelter that during a large part of the year one may sail along the protected shores of the islands of Catalina and Santa Cruz in the frailest and smallest crafts. The surface of the ocean is here as smooth as that of a mirror, while along the shore there is an absence of surf and swell, except at rare occasions. This almost continued smoothness of the waters offers unusual facilities for fishing, probably unsurpassed in any part of the world. The number of foodfishes found here in large abundance is such that a very large Indian population could have subsisted on them exclusively. Among shellfish there is an abundance of abalones and clams of various kinds, while shrimps, lobsters and crabs are nowhere more plentiful on the whole Pacific coast.

The physical feature of these islands is nearly the same in all. There is always a central backbone running in the long axis of the island. In the four islands of the southern group this axis runs north and south, but in the northern group it runs east and west.

The elevation of this backbone varies between 800 and 2200 feet giving ample protection against winds and furnishing a not inconsiderable drainage area for various creeks. Consequently water is to be found on all of the islands even during the dry season of the year. Owing to the height of the islands compared with the width, many of the streams have cut out deep gorges which again give shelter to small but beautiful woods of wild cherry, oak, cotton-wood, pines etc. The slopes facing the north of all the valleys are always densely and beautifully covered with bushes or even smaller trees, while the slopes exposed towards the south are covered with a dense mat of cacti and other desert plants.

The climate of all the islands is mild. Frost is rare or perhaps entirely unknown. During a five months stay on Catalina during the coldest season of the year the thermometer never went below 55 Fah. and ocean bathing was possible every day.

As regards wild fruits and herbs from which Indians could nourish themselves, there are several, all found in great abundance. We will only refer to a few. The principal one is the fruit of the wild cactus of which there are several genera and species. Even now the white visitors to the islands use these cactus fruits for preserves and value them for their acid, sweetness and flavor. When we consider that at least one half of all the surface of the islands is covered with cactus we may judge to the number of Indians which might have for several months in the year subsisted on its fruits which are good both fresh and cooked. The wild cherry already mentioned is of more limited distribution, but we still find it in large groves on several of the islands. The fruit is as large as our large cultivated cherries, though the meat is thin and insignificant compared with ours. There are besides a number of smaller fruits and berries, to say nothing of acorns and pinenuts, suitable to fill the natural and limited wants of the aborigines.

There remains only to say a few words of the animal life on those islands. When I first visited the islands in 1873, man had made very little change and inroad in the primitive aspect of the fauna and flora. I found the shore actually swarming with two species of seals and sea-lions. One species was said to breed on the islands while

the other bred] in the high north and only visited the coasts during the winter season. When white people first visited the islands they found the coast the home of the precious sea-otter, but at my visit I saw only two or three. Of birds especially the seabirds were numerous and rookeries were common on every low sandy promontory. The California valley quail was common everywhere on Catalina and Santa Cruz, but has since become scarcer on account of the increase of a small wild fox. This fox is found on all the islands and must have in ancient times furnished a large part of the fur used by the Indians for dress.

The above remarks on the nature, climate and fauna of the islands suffice to show that they must have been ideal places for a native population. Nowhere on the whole coast is there any locality so suitable to maintain a primitive population as on these islands. Elsewhere on the mainland the Indians could only maintain themselves in a certain locality for a few months at a time. At certain seasons they were obliged to follow the game to the plains, while at others they had to ascend the foothills and the mountains in quest of acorns etc. But on the islands the Indians could remain all through the year and still not suffer from want, as fruit, seeds, acorns, roots, fish, clams, crayfish, birds, eggs, furs and game were always plentiful at some time of the year. This abundance of food must have contributed to a greater physical development, while again the isolation of the islands would tend to make the inhabitants less warlike, and more gentle.

Considered from a purely scientific standpoint these islands are of the very greatest interest. It has been shown lately that each one of the islands contains a number of indigenous species of plants and also of insects. But the plants have been much more collected and I am told that the species of each island show some slight variations from those on the other islands, while many are entirely distinct. Some of the most beautiful plants and trees found in California are indigenous to these islands and found nowhere else. I will here only mention that the truly magnificent *Lyonothamnus*, one of the most beautiful trees in existence, is not rare on Catalina island.

Earliest Accounts of the Indians.

We derive our knowledge of the Indians from the following main sources: Early navigators, Mission Padres, early settlers, and

Ethnological remains. Of the early navigators only two have anything to say about the Indians of the Santa Barbara Islands. The first navigator to visit the coast of California was Juan Rodriguez Cabrillo. That the account of Cabrillo's voyage is scant is probably due to the fact that he died on the voyage, and was buried in the island now known as San Miguel. There are three accounts left of his voyage, but it is not known by whom they were written. Two accounts agree almost word for word, while the third appears to have been a condensed narrative from some other document.

Cabrillo sailed from the port of Navidad on the coast of Mexico on June 27, 1542. After having reached the coast of Baja California he doubled Cabo San Lucas and proceeded up the coast of that peninsula. In the end of September he reached the bay of Ensenada de Todos Santos, which he named San Mateo. From Ensenada he sailed along the coast north-west-wards and discovered the three Coronado islands which he named „Las Islas Desiertas“ on account of their barren nature. On the mainland almost opposite these islands he entered the port and harbor of San Diego, which he named San Miguel. From this port Cabrillo sailed again along the coast and discovered the two southern islands of the Santa Barbara group. The island of Clemente he named Vittoria after one of his vessels, but did not go ashore. The island of Catalina he named El Salvador after the other vessel. Here he went ashore for a short time. Crossing over to the mainland he entered Santa Monica bay naming it Bahia de los Fumos, on account of the many fires lit by the Indians. Off and on Cabrillo spent considerable time exploring the coast along the Santa Barbara Channel, evidently sailing up and down according to the winds. He named many of the localities as for instance Pueblo de las Canoas, Puerto de las Sardinas, Cabo de Galera now Cape Conception etc.

During one of these cruises he crossed over to the nothern islands which he named San Lucas. It appears that at first he mistook Anacapa, Santa Cruz and Santa Rosa, and perhaps even San Miguel, to be one single island. These islands overlap each other and from a little distance they appear as one. When he finally found that there were several islands he named the most northern one Isla de Posesion. After Cabrillo died his pilot in charge named this island after him „Juan Rodriguez“. The island of Sauta Rosa was finally referred to as „San Sebastian“, while the island of Santa Cruz was named Isla de San Salvador. This confusion is probably due either to

the fact that each one of the vessels named the islands separately, or as Prof. Davidson has suggested, that Ferrelo forgot that the name of San Salvador had already been given to an other island. With the latter half of Cabrillo's voyage we need not here concern ourselves. It will suffice to state that Ferrelo after the death of Cabrillo reached as far north as Cape Mendocino, returning from there in haste on account of distress, and after a short visit to the islands returned to the port of Navidad April 2d, 1543.

The next navigator to visit our islands was Viscaino. Sebastian Viscaino sailed from Acapulco May 5th. 1602. Rounding Cabo San Lucas he proceeded up the coast of Baja California and passing the Island of Cedros entered the bay now known as Sebastian Viscaino Bay. In due time he reached San Diego in Alta California and finally landed on the island of Catalina which he named Santa Cathalina. Catalina was the only island of this group that was visited by Viscaino. But Viscaino made a chart of what he found, and on this chart we find all the other islands of the group named and more or less accurately located. After visiting places on the coast opposite, Viscaino decided to defer a visit to the other islands until his return-voyage from the north. But even in this instance illness and want of food thwarted his designs and he was obliged to hurry home without again visiting the islands. As far as we know 167 years were to elaps before an other white man was again to visit the islands. The new comers were the San Franciscan Missionaries who in 1769 reached California.

The principal authorities for this period are the missonaries themselves and those who accompanied them. Thus we possess narratives of Fray Junipero Serra, Father Boscana, Pedro Fages and especially Miguel Costansó, the engineer of the first expedition. Of these accounts that of the latter is the most interesting as having been made by a layman. Unfortunately the largest part of the narrative concerns the hardships of the expedition, while comparatively little is told about the Indians.

The expedition of which Constansó was a member started in two large vessels from the port of La Paz in Baja California. Already in the begining of the voyage the two vessels became injured and had to be repaired in the bay of San Barnabé near Cape San Lucas. The „San Carlos“ reached at last the port of San Diego in Alta California the 29th of April 1769, 110 days out from La Paz. The other Packet „San Antonio“ had been more fortunate and altho' it had started a month later it arrived to San Diego in 59 days, the

11th of April. On the hardships suffered by the Spaniards we need to dwell. It will suffice to say the members of the expedition which originally numbered 90 or more, soon dwindled down to about 16, the others dying from scurvy and other diseases. In a few months the survivors were joined by a land expedition which had started overland from Loréto, and from this time on the exploration of the country began.

This exploration consisted principally in an overland expedition from San Diego northwards for the purpose of discovering anew the bay of Monterrey. This expedition which was headed by the Governor Don Caspar de Pórtala, together with Don Pedro Fages and Don Miguel Costansó, passed up the coast, and missing or passing by the bay of Monterrey, finally discovered the inner bay of San Francisco. It was principally during this journey that Costansó gathered his information about the Indians. His opinion of the natives differs considerably from that given by the missionaries, and is on the whole very favorable. His account is concise and evidently reliable, and will be referred to further on. There is no indication that Costansó or his companions visited the island, but he must have gathered considerable knowledge of their inhabitants as he refers to them several times in an indirect way. He must have frequently met with these hardy fishermen and sailors, whose skill in navigating their conoes, and in catching fish called forth the admiration of the Spaniards. The narrative of Costansó being the last account we possess of the Indians before they became christianised, is naturally of greater value than that given by later explores, who merely encountered the Indians after they already had been forced to leave their native haunts and settle in the missions.

The Islands considered separately.

San Clemente Island. Isla de la Vittoria (Cabrillo). The island was not named by Viscaino. The island is about 18 miles long by $3\frac{1}{2}$ miles wide. It is 1,964 feet high and is distant from Catalina 19 miles. It is visible 50 miles from the sea level. The Indians on the island were known as „Kinkapar“, and the island itself as Harasgna (according Bancroft).

At the time of Mofras 1838 there were yet Indians on this island. „They bring from there kaolin and sulfate of iron.“

Santa Catalina Island. Called San Salvador by Cabrillo, but named Santa Cathalina by Viscaino. Later on the Indian tribes on the island vere known as „Pineugna“. The island is almost divided in two, near the northern end, forming thus two fine harbors, one on the outer and one on the inner shore. The island is 18 miles long by about 7 wide. It is 2,110 feet high and is visible 53 miles. It is 18 miles from the port of San Pedro on the mainland, and $23\frac{1}{2}$ miles from Point Lasuen. Ferrelo's as well as Viscaino's anchorage must have been on the northern side of the island at the isthmus. Cabrillo and his men went ashore and „there issued a great number of Indians, and yelling and dancing made signs that they should come ashore. The Spaniards made sign that the Indians have no fear, whereupon these then laid their bows and arrows on the ground. The Spaniards remained there untill noon.“

Viscaino's account of the natives of this island is much more interesting. He found on the island many men, women and children. They were kind and gentle and received the Spaniards with extreme kindness. The women were handsome and honest, and the children fair and rosy and of a laughing disposition (Salmeron, Relaciones). They were in fact a fine looking race. They had many rancherias or Indian villages, with dwellings, and they built canoes with which they hunted seal and fishes. The canoes were made of bent planks tied together with ropes and cemented with asphaltum. The Indians were such expert fishermen with spears and harpoons, that one of them went down diving and soon appeared with a fish on the point of his spear. But the most interesting part of Catalina was the Indian temple. Viscaino describes it as large and circular, ornamented with feathers of various kinds. Within the circle was an idol, painted in various colors. At the sides of the idol were representations of the sun and the moon. Before this idol the natives were accustomed to sacrifice birds, the feathers of which adorned the enclosure. There were also two extraordinary large crows (ravens) which at the advent of the soldiers flew away and perched on rocks near by. The soldiers could of course not resist shooting the birds, at which the Indians set up a wailing. Other crows seem to have been quite tame and took food from the hands of some woomen washing fish on the beach. The natives used many roots as foods, which the Spaniards compared with potatoes and „jicamas“. The latter are probably the roots of lilies (*Calochortus*) which even now are abundant on the island. With these roots the Indians traded with the natives on the mainland, to which

they sailed over in their canoes which held from 8, 10, up to 20 men. The canoes were propelled with paddles.

On Viscaino's chart there is a small round circle placed on the isthmus probably indicating the place where stood the temple (Davidson), but at my visit in 1873 I found no remains of such a place. From the accounts of Cabrillo and Viscaino we may conclude that the Indians of Catalina were more advanced than the Indians on the mainland, of a gentler disposition, of a handsomer physic, and of considerable enterprise.

I may add that to this day Santa Catalina island offers greater advantages than most of the other islands, the vegetation being more abundant and the facilities for fishing better. The harbors are such as to afford shelter at almost any time of the year. It is interesting to note that the islands are overrun with ravens similar to those seen by Viscaino. They are equally impudent and will approach with little fear.

In Cabrillo's and Ferrelo's account we read that: „on the other island there are eight villages: Miquesesquela, Poele, Pisqueno, Pualnacatup, Patiquin, Patiquilid, Ninumu, Mnoc, Pilidguay, Lilibequé.“ This account of the villages is given in connection with the northern islands and not in connection with Catalina. But as the writer had previously enumerated the various villages of Santa Cruz, Santa Rosa and San Miguel, and as none of these villages were found mentioned on them, it seems to me probable that the names refer to villages on Catalina, the only one of the other islands visited by Cabrillo and Ferrelo.

Of the ability to fish and hunt Viscaino tells as follows. They are great fishers and hunters, and catch all kinds of fish with hook, spear or net. They have long harpoons, consisting of a slender pole, to the end of which is attached a string, and to the end of this a harpoon point. The smaller fishes were taken in their canoes, the larger dragged to shore. They hunted the seal successfully.

Santa Cruz Island. Named by Cabrillo „Isla de San Lucas, and later Isla de San Salvador. By Viscaino it was called on the chart Isla de San Ambrosio.“ According to Cabrillo and Ferrelo the Indians called the island Limun or Limu. Cabrillo learned that the following Indian villages existed on this island: Niquipos, Maxul, Xugua, Nitel, Macamo, Nimitopal. According to Bancroft the following are names of Indian villages on this island — probably at a later period — : Maschal, Nanahuani, Sasaguel, Lucuyumnu, Chalosas. And according to the same

author the island itself was known as Liniooh. The original authority is not quoted.

The island is 20 miles long and about $3\frac{1}{2}$ miles wide. It is 2,410 feet high and visible some 55 miles. Of the natives of this island neither Cabrillo nor Viscaino give any account. The island has once been thickly populated as is shown by the many burial grounds. Unfortunately the largest one of these was washed away in 1879 by a destructive waterspout.

Anacápa. The island of Anacápa is a mere rock, without harbor and even without water. No vegetation can be seen from off the shore. It is the smallest of the islands of the channel. It was called by the Indians „En-ni-ah-pagh“ and by Vancouver referred to as Enneeapah. The present name is probably a corruption of the Indian name. The island is $4\frac{1}{2}$ miles long, and about 980 feet high.

Santa Rosa Island. Named first by Cabrillo „San Lucas“, but later on during the return voyage referred to as San Sebastian. By Viscaino the island was marked down on the chart as Isla de Cleto. According to Cabrillo the Indians called the island „Nicalque“. According to Bancroft the Indian name was „Hurmá“. Cabrillo mentions that there are three villages on the island called: Nicochi, Coycoy, and Coloco. On the return voyage they are called „Nichochi“ and „Estocoloco“. The island is $16\frac{1}{4}$ miles long by 9 miles wide. Its elevation is 1,500 feet. It contains about 50,000 acres of ground or about 73 square miles. The average height is about 600 feet, and the average length and width are 9 miles by $7\frac{1}{2}$ miles. This island is apparently less suited to sustain life than Santa Cruz and Catalina, but both accounts and investigations show that the Indian population was once very numerous. The winds on the island are terrific, and there are at present only few trees even in the ravines. Water however is plentiful in certain parts, and dry seasons are scarce.

At Cabrillo's visit the island was inhabited. „It is inhabited and the people are like those on the other islands.“ Again we read: The inhabitants of these islands are very poor. They are fishermen, they eat nothing but fish; they sleep on the ground; all their business and employment is to fish. In each house they say there is fifty souls. They live very swinishly; they go naked.“ „There is a regular row of islands — — —. Some are large others are small, but all are inhabited and populous, and the inhabitants trade with each other and with those on the continent. They are however very populous.“ In another place we read: „They found them (Santa Rosa

and San Miguel islands) very populous, and these people, and all these of the coast passed by, lived by fishing, and make beads from the bones of fishes, to trade with the people of the main land."

San Miguel Island. Called by Cabrillo „Isla de Posesion“, but after the death of Cabrillo the island was named by Ferrelo, his pilot, after the admiral: „Isla de Juan Rodriguez“. On the chart of Viscaino the island is marked down as „Isla de Baxos“. According to Cabrillo and Ferrelo the island was known by the natives as: „Ciquimuyu“. In Bancroft we read that the island was called „Twocan“, but by what authority is not quoted.

The island is $7\frac{1}{2}$ miles long and about 700 feet high. Formerly the island was very fertile, perhaps the most fertile of all the channel islands, but at present it is little more than a barren sandy waste. There is now a rather land-locked harbor, known as Cuyler's harbor, but even this has deteriorated on account of a land slide or earthquake taking place about five years ago. The island was once thickly populated by Indians. Cabrillo tells us „In the island of Posesion there are two villages: „Zaco“ and „Nimollolo“. „They were well treated by the Indians, every one going naked, and they have their faces painted in the manner of a chess-board. To this port they gave the name of Posesion.“

According to Vancouver this island was also marked down on the spanish charts as „Isla de San Bernardo“.

Santa Barbara Island. The island is thus named on the chart of Viscaino. The island is only about 7 milles long and only 547 feet high. It can be seen at a distance of 27 miles. Neither Cabrillo nor Viscaino visited the island. We know however from the Indian remains found that the island was once densely populated.

San Nicolas Island. So named on the chart of Viscaino. It is the one most distant from the mainland and one of the least fertile, poorest of the islands. It is 890 feet high and can be seen 34 miles away. The island is about 8 to 20 miles long.

This island is interesting, because on it lived the last remnant of the Indians belonging to the island tribes, indeed the only Indian of whom we have a detailed account. The island was like the others once thickly populated, but little by little the number of inhabitants became less. The reason is not fully known. But it is by some believed that the natives were partly exterminated by Indians from Alaska who had been brought down to these islands to hunt sea-otter. Any how it is known that already in 1811 a ship from Boston

had landed some 30 Indians from Kodiak on San Nicolas and it is said that they killed all the native men, and appropriated the women. However this may be, certain it is that in 1835 the natives on the island had dwindled down to 18, and it was decided by the missionaries on the mainland to remove these Indians to the missions of the mainland. Accordingly a vessel was sent to the island of San Nicolas and the Indians gathered in. This was in 1836. But when the Indians were all embarked, one of the women missed her babe. It had been left behind in some way. The mother started to hunt for it, but remaining away very long, and on account of a sudden and very heavy wind, the small vessel had to leave and lie before the wind out to sea. In course of time the Indians were landed at Santa Barbara and probably merged in other Indian tribes. The vessel which was again to visit the island in order to bring back the remaining woman, was unfortunately shipwrecked on the coast, and as there was no other vessel of sufficient size to brave the rough waters around the island, it came to pass that for 18 long years the Indian woman was left to her fate on the island. It was only in 1853 that a hunter with the name of Nidever from Santa Barbara visited the island and brought the woman away. He had seen some things of her already two years previously, but was then unable to find her. During this visit Nidever had seen several small windbreaks made of branches and canes. They were in the form of a half circle and bound together with grass ropes. He had also found regular, small, pyramidal houses or Indian huts made of branches etc., but the grass growing in them, and their dilapidated condition generally indicated that they had not been used for years. When he found the woman at last she was living in such a windbreak. We may now follow Nidever's tale: "She was sitting in an enclosure, so that her head and shoulders were barely visible above it. As the white man approached, two or three wild dogs began to howl, but she gave a yell at the dogs who then disappeared. She was sitting crosslegged on some grass that covered the ground within the inclosure and which seemed to serve as bed. Her only dress consisted of a kind of gown, leaving her neck and shoulders bare, but it was long enough when she stood up to reach to her ankles. It was made of bird (shag) skin cut in squares and sewed together, the feathers pointing downwards. Her head had no covering save a thick mass of matted hair of a yellowish brown color, and which looked as if it had rotted off. (See the account of Cabrillo and Viscaino of the fair color of the Indians). She was

engaged in stripping a piece of blubber from a sealskin. Within the enclosure was a smouldering fire and a heap of ashes. She was constantly talking to herself. When first seeing Mr Brown the companion of Mr Nidever she smiled and received him most graciously and with much dignity and selfpossession. And when the other men came up, she greeted them in the same manner.

The Indians which Mr. Brown had brought along did not understand a single word of what she said, although they knew several different dialects. From a bag she took out several roots (carcomites(?), also other roots, and roasting them on the fire she offered them to the men to eat. They found them very palatable. The visitors soon made her to understand that they wanted her to leave the island with them, and gathering up her belongings she was soon ready to start. She packed most of the things in a large basket made of rushes, while other of her things were bundled up by her visitors. She had so many things that every one of the visitors carried some of her belongings when leaving. Among her things was an extra dress made of fine birdskins and finely ornamented. She also insisted upon carrying off all the old dried blubber, and a seal's head which was so decayed that the brain was oozing out. She evidently desired to bring every thing that would sustain life. When all was ready she took from the fire a burning stick in her hand and walked out. She led the party by a fine spring from which she drank, and then led them to an other spring in which she washed her face and hands. The island was inhabited by foxes and by wild dogs, similar to those which Nidever had seen among the Indians of the northern part of California. The indian woman took kindly to the food of her visitors, and evidently preferred it to the one she had been accustomed to. She was exuberant when one of the men made her a dress of calico, and observing how the man was sewing she insisted to try her hand at this too. She would push the needle in the cloth with her right hand and pull it out with her left one. At first she did not know how to thread the needle, but she learned quickly. In the hunters camp she made herself useful, in carrying wood and water. She occupied herself with making several baskets, but she worked at several at the same time, first doing a little work on one and then dropping it for another. She made the baskets watertight by placing inside several lumps of asphaltum together with some few heated pebbles. The asphaltum melting she gave the pebbles a rotary motion which soon covered the interior of the baskets with an even watertight coating, after

which the pebbles were thrown out. During a storm that threatened to upset the small boat she made signs that she could stop the gale. Kneeling down on deck and facing the wind she began incantations and prayers. When the sky suddenly showed sign of clearing she pointed to it with pride as if to say „see I did it“.

She had never been on the mainland before, and she showed great astonishment at every thing she saw. She showed a childish delight when she saw an ox-cart, and quickly immitated the revolving motion of the wheels with her hand and arms. And when a gentleman rode down to the beach she was evidently dumbfounded by seeing him on the horse. She quickly immitated the motion of the horse by placing her first two fingers of her right hand over the thumb of her left hand, and mimicking the galloping of the horse she gave a shout of delight.

She was taken care of by the family of Mr. Nidever and had every thing she wanted. She could however only communicate by signs as there was no one to understand her language. An other old indian woman was said to understand a few words (according to Hittell's History, but I do not find it mentioned in Nidever's account), but otherwise there was none who could understand her. She soon became an expert in using signs, and after a few months made herself well understood that way. She was passionately fond of fruits and would eat them constantly. This brought on a dysentery from which she did not recover. She did not survive more than four months her removal from the island. „She had a warm love, was grateful and affectionate as a child, and was of a gentle and lovable nature“. After her death her belongings were gathered together and sent to Rome! except a water bottle made of rushes and covered with asphaltum, which bottle is now in the posession of the California Academy of Sciences San Francisco. It was not until a short time before she died that she understood that they wished to know some thing of her language. Only a few words of hers are now preserved: Hide = tokah; Man = nache; Sky = toygwah; Body = puoochay.

From sigus that she made they understood that the wild dogs had eaten her child, and that when she found it out she lay down on the ground and cried. When she at last got up and returned to the schooner it had already left. She had a generous nature and when given trinkets etc. she would soon give them away, just as did the Indians met by Cabrillo and Viscaino.

Indians on the Main opposite the Islands.

Of these Indians we have several rather exhaustive accounts principally by some of the mission fathers. But these accounts tell us exactly what we least desire to know, and of what we do wish to know they tell us little. The missionaries had no other object in view than to convert the heathens and to glorify Rome. In every action of the Indians they saw only inspiration of the devil. Instead of trying to uplift the Indians, they enslaved them under a tyranical yoke. The missionaries opinion of the Indians can not be accepted without much modification and doubt. Of greater value are the very scanty mentions of the Indians by the early navigators. Cabrillo refers to the Indians of Santa Barbara several times. When he approached the shore the Indians disembarked in their canoes which were made of bent plank tied together with rope and cemented with asphaltum. Some of the canoes held up to 20 men. Everywhere Cabrillo tells us that the Indians were well disposed, that they were armed with bows and arrows and went clad in skins. At San Diego or Ensenada they called the Spaniards „Cuacamal“.

Vancouver tells us that when he approached land at Santa Barbara, an Indian canoe was launched with four men. They had paddles ten feet long, with blade at each end, and they managed the canoe with such a skill that they brought out the admiration of the Spaniards. This was as late as in 1838. The whole coast along the channel seems to have been thickly populated. Cabrillo tells us „that from morning to night the ship was surrounded by canoes. The Indians brought with them quantities of sardines: very good; they say that inland there are many villages and much food. The people do not eat any maiz; they went clothed in skins, and wear their hair very long and tied up with cords very long and placed within the hair; and these strings have attached to them daggers of flint, and of wood and of bone“. In an other place: „The natives aided in bringing water and wood to the ship. The village is called Cicacut. Other villages from that place to Cape Conception are called: „Cincut, Anacat, Maquinanoa, Paltare, Anacvat, Olesino, Coaacac, Paltocac, Tocane, Opia, Opistopia, Nocos, Yutum, Auiman, Micoma, Caromisopona. An old indian woman is princess of those villages. She came on the ship and slept there two nights together with other Indians. The village of Ciucut appeared to be the capital of the villages. The

village at the cape is called Xeno, and another province is called Xucu. They have their houses rounded and covered very near down to the ground. The Indians eat acorns and another grain which is large as maiz and white, of which they make tamales. It is good for food. They say that inland there is much maiz. Indians came on bord with water and fish, and showed much good disposition. They have in their villages large public squares, and they have an inclosure like a circle, and around the inclosure they have many blocks of stone fastened in the ground which issue about 2 palms (hands), and in the middle of the inclosure they have many sticks of timber driven in the ground like masts, and very thick; and they have many pictures on these same posts, and we believe that they worship them, for when they dance they dance around this inclosure."

Half a century later Viscaino found the same conditions on the mainland. Of the San Diego Indians he says that they were a fine looking race, clothed in sealskins and that they received the Spaniards with extreme kindness. They had large dwellings and numerous ranches, made excellent canoes, and were expert fishermen and hunters. Higher up on the mainland somewhere near Santa Barbara, he found that the country was governed by a chief who offered them hospitality, and who even went so far as to offer every Spaniard ten wives if they desired to remain with them.

Vancouver who visited the coast two hundred and fifty years later, found the Indians very much the same. He has a very good idea of the Indians „which behaved themselves with much decorum, much sensibility and much vivacity, and with good order, very unlike that inanimate stupidity that marks the character of the northen Indians we have seen under the Spanish jurisdiction at San Francisco and Monterey.“ But some change had taken place since Cabrillo's and Viscaino's time. Father Vincente told him how the Indians were suspicous and regarded all strangers as enemies and refused to visit other „societies“.

The narrative of Don Miguel Costansó has already been referred to. The following is an extract from the same. I have excluded everything which does not directly concern the Indians and the paragraphs follow each other in the same manner and order as in his narrative. At the first arrival in the port of San Diego: „they discovered at a little distance a troop of Indians armed with bows and arrows; to whom they made signs with white cloths calling them to a parley. But they setting their steps by those of our folk, for

more than half an hour, did not permit them to come up. These Indians stopped every little while upon some height, watching our folk, and evidencing the fear which the foreigners caused them by the very thing they did to allay it. They thrust one point of their bows down in the soil, and grasping it by the other extremity they danced and whirled about with unspeakable velocity; but as soon as they saw our folk near, they again withdrew themselves with the same lightfootednes.“ The Indians soon however became friendly and showed the Spaniards where a river and water could be found.“ A river came down from the high Sierras thro’ a spacious cañada. At a gunshot from it and outside the wood, was discovered a pueblo or rancheria (Indian settlement). It was composed of huts of a pyramidal shape and covered with earth. On sighting their companions with the Spaniards all came out of their houses to receive them, men, women and children, proffering their houses to their guests. The women came in decent garb, covered from waist to knee with close-woven and doubled nets. The pueblo consisted of some 30 tr 40 families: and at one side of it an enclosure stood guard, made of branches and trunks of trees. In this they gave to understand that they took refuge to defend themselves from their enemies: a fortification inexpugnable to the arms in use among them. These natives are of good figure, well-built and agile. They go naked without more clothing than a girdle of ixtle (Agave), or very fine maguey fibre, woven in the form of a net. They get this thread from a plant called the Lechuguilla. Their quivers which they bind in between the girdle and the body, are of skins of wildcat, coyote, wolf or deer, and their bows are two varas (66 inches) long. Besides these arms, they use a species of warclub of very hard wood, the form of which is like that of a short and curved cutlass, which they fling edgewise and it cleaves the air with much violence. They hurl it to a greater distance than a stone. Without it they never go forth in the field; and if they see a viper or other obnoxious animal, they throw this „manaca“ at it and comonly sever it in half. According to the experience afterwards in the continual intercourse with our Spaniards, they are of haughty temper, daring, covetous, great jesters and braggarts; altho’ of little valor, they make great boast of their powers, and hold the most vigorous for the most valiant. They crave whatsoever rag; but when we have clothed different ones of them on repeated occasions, they would present themselves the following day stark naked. The principal sustenance of the Indians around this port is fish. They

eat also much cockles. They use rafts made of rushes, which they manage dexterously with a paddle or oar of two blades. Their harpoons are some varas (one vara is 33 $\frac{1}{4}$ inches) in length; the point is of bone, very much sharpened, inserted in a shaft of wood. They are so dexterous in hurling this that they rarely miss their aim. „Of the Indians encountered during the expedition towards the north, Costanzo tells us that: „all are peopled with a multitude of Indians, who came out to meet them and in some parts accompanied them from one stage of the journey to the next: „a people very docile and tractable, chiefly from San Diego onward“ (up the coast). “The Indians in whom was recognized more vivacity and industry, are those that inhabit the Islands and the coast of the Santa Barbara Channel. They live in villages with houses of spherical form, in the fashion of a half orange, covered with rushes (probably *Juncus* and *Scirpus*). They are up to twenty varas (55 feet) in diameter. Each house contains three or four families. The hearth is in the middle, and in the top of the house they leave a vent to give exit for the smoke. In nothing did the natives give the lie to the affability and good treatment which were experienced by their hands in other times (1602) by the Spaniards, who landed upon those coasts with the general Sebastian Viscayno. They are of good figure and aspect, men, women and children; very much given to painting their faces and bodies with red ochre. They use headdresses of feathers, and some small darts which they bind up in their hair, with various trinkets and beads of coral of different colors. The men go entirely naked, but in time of cold they use long capes of tanned skins of sea - otters, and some mantles of the same skins cut in long strips, which they twist in such manner that all the fur remains on the outside; then they weave these strands one with the other, forming a weft, and give it the pattern referred to.

The women go with more decency, girt about the waist with tanned skins of deer which cover them in front and behind more than half down the leg, and with a cloak of otter skins over the body. There are some of them with good features. These are the Indian women who make trays and baskets of rushes, to which they give a thousand different forms and graceful patterns, according to the uses to which they are destined, whether it be for eating, drinking, guarding their seeds, or other ends, for these peoples do not know the use of earthenwares as those of San Diego use it.

The men work handsome trays of wood, with firm inlays of coral or of bone; and some vases of much capacity, closing at the

month, which appear to be made with lath* — — and with this machine would not come out better hollowed nor of more perfect form. They give the whole a luster which resembles the finished work of a skilled artisan. The large vessels which hold water are of a very strong weave of rushes pitched within; and they give them the same form as our own water jars.

To eat the seeds which they use instead of bread, they toast them first in great trays, putting among the seeds some pebbles or small stones heated until they are red hot; then they move and shake the stones in the tray so that it may not burn; and when the seed is sufficiently toasted they grind it in mortars of stone. Of these mortars there are some of extraordinary size, as well wrought as if they had had for the purpose best tools of steel. The constancy, attention to trifles, and labor which they employ in finishing these pieces, are well worthy of admiration. The mortars are so appreciated among the Indians that for those, who dying leave behind such handiworks, they place them over the spot where they are buried. They inter their dead. They have cemeteries within the very village. The funerals of their captains they make with great pomp, and set up over their bodies some rods or poles, extremely tall, from which they hang a variety of utensils and chattels which were used by them. They likewise put up in the same place some great plank of pine with various paintings and figures. Plurality of wives is not lawful among these people. Only the captains have a right to marry two. In all the pueblos we found men who lived like women, kept company with them, dressed in the same garb, adorned themselves with beads, pendants, necklaces, and other womanish adornments, and enjoyed great consideration among these people.

In their houses the married couples have separate beds on platforms elevated from the ground. Their mattresses are some simple mats made of rushes, and their pillows are of the same mats rolled up at the head of the bed. All these beds are hung about with mats, which serve for decency and protect from cold.

The dexterity and skill these Indians use in the construction of their launches made of pine is truly surpassing. They are from eight to ten varas (22 to 27 $\frac{1}{2}$ feet) in length, including their rake, and a vara and a half (4 feet 1 $\frac{1}{2}$ inch) beam. Into their construction enters no iron whatsoe'er, of the use of which they know little. But

*) The potter's lath was not known to the natives.

they fasten the boards with firmness, one to another, working their drills just as far apart and at a distance of an inch from the edge, the holes in the upper boards corresponding with those in the lower and thro' these holes they pass strong lashings of the sinews of deer. They pitch and calk the seams, and paint the whole in sightly colors. They handle the boats with cleverness, and three or four men go out to open sea to fish in them, as they have capacity to carry eight or ten men. They use long oars with two blades, and row with unspeakable lightness and velocity. They know all the arts of fishing. They have communication and commerce with the natives of the islands, whence they get beads of corals which are current in place of money in all these lands: altho' they hold in more esteem the glass beads which the Spaniards gave them, and offer in exchange for them whatever they had, like trays, otter skins, baskets and wooden plates. More than any thing however they appreciate any claps-knife or cutting instrument, whose advantages over the flint implements they admire."

"They are likewise great hunters. To kill deer and antelopes they avail themselves of an admirable ingenuity." Costansó here describes how they, dressed in the hides and horns of the deer, steal up on them by crawling, and when at proper distance: "drag themselves along the ground with the left hand. In the right hand they carry the bow and four arrows. They lower and raise the head, moving it to one side and the other, and making other demonstrations so like these animals that they attract them without difficulty and having them within a short distance, they discharge their arrows at them with certainty of hitting. "Their language is sonorous and of easy pronunciation."

From the channel of Santa Barbara northward, the lands are not so populous nor the Indians so industrious, but they are equally affable and tractable."

During the return voyage of a vessel sent with provisions to Monterrey, the Indians informed the Spaniards of the landexpedition which had passed along the coast previously. Says Costansó: "This is the most westerly land of the channel of Santa Barbara; and in its shelter they managed to take on water, close to a settlement of natives, who gave them individual account of the expedition by land; declaring by no equivocal signs how the strangers had passed going towards the north, and had returned, short of food, passing towards the south, mounted on their horses. The which they expressed by stradling some barrels which the mariners had brought ashore, and

also making other demonstrations proper to a man on horseback.“ They mentioned likewise the names of various soldiers „which made it evident that these words were not pronounced casually, especially as the were recognized by those present.“

According to the missionaris (Except Junipero Serra who had a favorable opinion of all Indians) these Indians, which Cabrillo, Viscaino, Costansó and Vancouver have praised in no uncertain term, were the most degraded among human beings. They desired nothing else than to lie on their stomach and do nothing, while morally they rated even below the animals. „Those who are interested in learning more of the Indians of the mainland can do no better than to peruse the account given by Boscana in his „Chinigchinch“. This history of the Acagchemen nation contains about one hundred pages, the contents of which are already too condensed to be further condensed here. Boscana treats both of religious and civil usages of the Indians of his mission, but he sees every thing only from the standpoint of the priest.

Indian Remains.

The remains of the island Indians as well as of those on the mainland consist principally in shellheaps or kitchenmiddings. These shellheaps are numerous on all the islands as well as on the shores of the channel. Many of these shellheaps have been dug over and the contents extracted in a deplorable and unscientific manner. Of late years explorers have been sent out by the University of California, through the munificency of Mrs Ph. A. Hearst and much scientific work has been done. Much however remains to be done.

Of the temple on Catalina seen by Viscaino no remains have been found so far, but on the mainland there are a number of circular structures, if so they be called, which coincide with the descriptions of temples given by Boscana and Viscaino. When the islands are better explored we may find them there too.

The shellheaps on the islands vary in size, the largest one which I saw was not over 300 feet long by fifty feet wide, and perhaps ten feet high. The one on Santa Rosa from which I extracted the skulls and skeletons presented to your Society, was not over twohundred feet long, and perhaps twenty feet wide, with a height of perhaps ten feet. But there seemed to be a succession of shellheaps, though the others were much smaller. They were situated on the northside of

the island about four miles from the harbor facing Santa Cruz. The heap from which the bones were taken was situated about 200 feet from the water or shoreline, and so high on a rocky ledge that the waves at no time could reach the place. The skeletons appear to have been covered with only a couple of feet of shells and sand, and had undoubtedly been buried in the immediate vicinity of the houses which once existed there. In some places I found depressions of several feet, indicating that a house had existed there and that the refuse thrown out had so accumulated as to raise the ground several feet around the house. The bodies were all doubled up and had been buried in a lying down position, and not in an upright one. They were evidently placed face downwards. It appears that the bodies had been placed close together, a few inches perhaps apart. They were all found within a space of not over twenty feet square, and not over two feet below the surface. The easiest way to find them is after a heavy rain or even after a heavy wind storm, when many of the bones and skulls will be found to be exposed on the surface of the ground. As regards the entire skeletons I was very careful in keeping the bones belonging to each skeleton separate and together with the skull belonging to each. But as regards the odd skulls I am not certain if in every case the inferior maxilla is the one that originally belonged to the skull. Some of these skulls were found on the top of the ground and the inferior maxilla was nearly always separated and some distance away. I found no implements or ornaments, though such have been found in many places in similar heaps. The shellheaps were situated on a ledge of rock perhaps about fifteen feet above the waterlevel, and the waves were breaking so violently against the rocky shore that it is not to be supposed that the Indians could ever have launched any canoes at this place. It is more probable that the Indian settlement at this locality was due entirely to the great amount of abalone shells (*Haliotis splendens*), which were very numerous and could be gathered at low tide by the thousands.

Indian Languages.

According to Major Powell there are some 22 different Indian languages in California, and what is as remarkable or even more so is that among these languages nearly one half of all the linguistic stocks of North America are represented. When we consider that there

are fifty two recognized linguistic families between Mexico and Canada, this will seem the more puzzling and remarkable. Professor Kroeber who has more than any one else investigated the Indian languages of California accepts fully the arrangement of Major Powell, also making the California languages 22 in all. From his map of these languages we learn that the one spoken by the Indians on the mainland of Santa Barbara was called „Chumash“. It was natural to suppose that the language of the island Indians was related to this one. According to a note found in the County History of Santa Barbara and Ventura Counties published in 1886, I learn that according to Cassac each one of the islands of the Santa Barbara channel possessed its distinct dialect or language. To what extent this is true I know not as I have not been able to ascertain who Cassac was, nor learned any thing about any writings of his. In submitting to Dr. Kroeber the four words left from the language of the last inhabitant on San Nicolas Island, I received from him the following answer. „The Indians of the three northern of the Santa Barbara Islands are known to have belonged to the same group as the inhabitants on the main land of Santa Barbara County — the Chumash. As to the three southern Islands nothing definite appears to be really known. Powell says that they presumably belonged to the same family as the inhabitants of the three northern islands. I have done what I could to compare the four words you sent me. The two for animal hide and body, I have not been able to do anything with, as most of the extant Indian vocabularies do not give the corresponding terms. The word for body seems to have a Chumash form, but it may have been mutilated etc, and I attach little weight to it. The two words for man and sky look very much as dialectically differentiated and perhaps mutilated forms of Shoshonean words. — — The Shoshonean affinity can not be regarded as conclusively proved, but the indications seems certainly to point that way for San Nicolas Island.“ Considering these uncertainties a comparison of the bones and other remains of the Indians of the various islands will prove of much interest.

Summary of our knowledge of the Island Indians.

The Indians of the Santa Barbara Islands belonged to at least two distinct linguistic families as far as we know, but it is much more

probable that each island had its own dialect and possibly there were more than two distinct languages.

The Indians of the islands were taller and better built than those further north, and in appearance they were in many respects prepossessing. The complexion of the women and children was fairer than of those on the mainland, or those further north. They went dressed in gowns made of skins of seal, otter and fox, as well as of birds, the gowns being well made and ornamented.

In manner the Indians were gentle and peaceful, though they were armed with bows and arrows. They were grateful for favors and liberal with their provisions and trinkets. They showed however great cunning in stealing.

The sites of the Indian villages were generally close to the shore and near to drinking water. Of their villages nothing more now remains than shellheaps. Their houses seemed to be made of stakes, canes or of driftwood, and had a round form, and often covered with skins. Besides conical and closed houses they had windbreaks of round or semicircular form.

The utensils of the Indians were quite numerous and well made. They had circular stone mortars with pestles made of soapstone and steatite, principally found on Catalina and Santa Rosa Islands. These pestles were often ornamented. The largest mortars would hold four gallons, while the smallest only a quart. They were used for grinding acorns, nuts, seeds and grasshoppers. Flat, oblong stones were used for baking tortillas.

Cups, bowls, ladles were cut from fireproof stone, and often highly polished. Knives were made of bone and flint, some were for every day use, others of the largest size were for ceremonial purposes. The shell of the abalone (*Haliotis*) was used for cups and plates. The women were experts in making baskets, and the one remaining from San Nicolas shows great skill. They were braided from various kinds of roots and fibres. Those for holding water were lined with asphaltum. Cooking was done by dropping hot stones in these baskets.

Fermented drinks and lemonades were made by pouring water over certain seeds coated with citric acid.

Smoking utensils are common in the shellheaps. They were made of serpentine stone and furnished with mouthpieces, cemented with asphaltum. Tobacco (*tabaco*) was and is yet growing wild on the islands.

Fishhooks were made of bone and shells. Bows were made of wild juniper, and the points of arrows were made of flint. They had flint knives for scraping hides. In fishing they used nets, and discoidal stones with beveled opening in center, for sinkers. Some of these discoidal stones were probably also ceremonial. Whistles and flutes were made of bone. As money they used flat, worked shells as well as perforated oliva shells.

As food they used seeds, acorns, nuts of pine, wild cherry, cactus fruit and several kinds of roots and bulbs, but it does not appear with certainty that they cultivated the maiz. Fish, clams, abalones, shrimps, lobsters (so called) are abundant on all the islands. Insects and especially grasshoppers were favorite food and they probably also fed on the large native earthworms common on the islands. On the mainland the Indians catch the worms by running a stake deep in the ground and then twisting it around. In a few minutes the worms will become scared and leave their holes and appear on the surface.

Of larger animals there were seals, foxes and dogs in abundance, and I read that there were also deer, though this must be considered doubtful. Whalebones are often found in the shellheaps, and we are told that stranded whales were used as food.

That the Indians professed some kind of religion is certain, as they possessed temple inclosures in which they worshipped. Father Boscana has given an extensive account of the worship of the Indian god Chinigchinich in the vicinity of San Luis Capistrano. As the temple inclosure on the island was similar to those described by Boscana it is probable that their worship also was somewhat similar.

As regards marriage the men had several wives. Their morality was probably similar to that of the mainland Indians or very low.

The bodies of the dead were doubled up and buried in the immediate vicinity of the house, and only covered with a foot or two of soil and refuse. The belongings of the diseased were often buried with him. The body was placed face downwards.

Extinction of the Island Indians.

As regards the number of Indians which once inhabited the Santa Barbara islands we know nothing with certainty. Judging from the shellheaps on the islands I think it is safe to say that some of

the islands probably supported as many as one thousand souls. At the time of Cabrillo and Viscaino the mainland in the vicinity of Santa Barbara was thickly populated. We may assume that the Indians in that vicinity reached five thousand in all. Pérouse gave the Indian population in the whole of California as fifty thousand in 1786, while Vancouver in 1893 estimated the native population in both Californias as 200,000 more or less. This estimate is probably and undoubtedly greatly exaggerated like all estimates not based upon actual census. The records of the missions show that in 1795 the population in the missions and presidios of Alta California reached 12,216, and that of Baja California 4551. In 1805 the census gives in Alta California 22,637. In 1818 we are told that there were 22,238. In 1830 we learn from the missionaries that up to that time 85,377 Indians had been baptized, and that there were yet living 24,634. In 1842 the estimate in Alta California was 9000 to 10,000. Hittell thinks that the native population never exceeded 70,000 in the two Californias, or about one for every four square miles. As soon as the whites arrived to the country the natives began to diminish in number. In some parts of California the natives have remained much longer than in other parts. In all California there are probably now only a few thousand Indians left. In Santa Barbara and vicinity there were left about 900 Indians in 1823. In 1875 all had disappeared. As has already been stated the last Indian were removed from San Nicolas in 1853. Of the other islands we have no account left.

The question arises „what caused the Indians to die off?“ In the balance of the U. S. A. Indians were to a great extent exterminated during Indian wars, but in California there seem to have been no serious Indian wars. Many believe that the island Indians were exterminated during years of famine and years of drought. Still I can not think that this was the case. As far as food is concerned the islands were rich. A large Indian population could sustain itself on fish and abalone shells alone, to say nothing of the roots and seeds of the land. As far as water is concerned we do not know that it has ever failed on any of the islands until the introduction of sheep and cattle by the white man. Other writers presume that diseases of various kinds carried off the natives, diseases of course introduced by the white men. There can be no doubt but that diseases have not only decimated, but actually exterminated whole Indian tribes, especially on the mainland, but other causes seem to have been most active on the islands. From the very first advent of white man it

was realized that the islands were immensely rich in fur-bearing animals, the seaotter being one of the most valuable in the world. It is almost certain that white hunters of these animals played great havoc with the Indians. In 1838 we are told that a vessel from the north landed 30 Indians from Kodiak on San Nicolas, and that these northern Indians, armed with firearms, all but exterminated the natives. Many similar accounts have been recorded.

The white settlers also found that the islands were especially adapted to raising cattle and sheep. At one time there were thus 60,000 sheep on the island of San Miguel, and as many or many more on the other islands. It is perfectly certain that these early white cattle men and sheep-owners would not permit the Indians to dwell among their stock, and it was probably through their influence that the Indians were gradually forbidden the islands. Many were no doubt killed outright while others were removed and made to join the missions on the mainland. But even before this final evacuation took place it is quite probable that the Indians on the islands had diminished in number. The gathering together of the mainland Indians in the missions must have revolutionized the whole life of the Indians. The Indians on the mainland were forced to cultivate maize, and other vegetables and naturally their former trade with the islands fell off. This in itself would probably cause the Indians of the islands to emigrate and settle on the mainland. However as there are no records left these suggestions are mere speculations of little if any scientific value. The main factors in the extermination of the island Indians were undoubtedly, murders by otter hunters, murders by cattle and sheep-men, and to which may be added diseases introduced by the whites, and to which the Indians were in no way immune.

As regards diseases there are records of the havoc played among the Indians of the mainland of smallpox, cholera, typhoid, dysentery etc., probably all diseases introduced by the Spaniards. We are told that during some years more than two thousand Indians died on the mainland in the vicinity of Santa Barbara. To account for this susceptibility to disease we must consider two things. The Indians in their native haunts had not formerly associated with white man and there could thus never have been a natural selection of those more immune to diseases of the white man than others. There had in other words been no antitoxines developed in the systems of the Indians, at least not to the diseases of white man. We know with considerable certainty that the diseases which carried off the most Indians

were small-pox, syphilis and dysentery. Of the other diseases mentioned we can now not recognise any sufficiently to identify them. Fevers, cholera, typhoid, etc. were words frequently used by the Spaniards. What they were we do not know.

But perhaps the most important point in connection with the extinction of the Indians was their changed mode of living. Instead of roaming around the hills at their free will, hunting, fishing and collecting seeds and acorns, and changing their habitations with the seasons, we now find a complete change in their mode of living. The missionaries caused the Indians to be gathered around the missions, and made them live in stationary huts. The absence of all sanitary conditions soon told on the natives. As the ground became infiltrated with filth, diseased germs thrived and the robust nature of the natives became weak. In our day what few Indians remain are doomed to extinction. A friend who lately visited the convent school at San Diego where numerous Indian children were taught by nuns, remarked that nearly all the children were ill, some of them with tuberculosis. They were shut up within four walls and were giving their lives in exchange for a little knowledge of the prayer-book. And when he asked the prioress of the school, "why don't you give the children air and sun?" she simply stated that "it was against the rules". When we failed to hear any thing of the 18 women and children who were removed from the island of San Nicolas in 1838, and when we learn that not one of them was evidently alive in 1853, while the poor old survival left on the island was healthy and hearty, we may well presume that the new mode of living had quickly carried them off.

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